

Remarks/Arguments

The Examiner is thanked for his careful review of this application. A Request for Continued Examination (RCE) is being filed under 37 CFR § 1.114 for U.S. Patent Application Number 09/678,423, filed on October 2, 2000. The Applicants submit this Preliminary Amendment in response to the Final Office Action, dated March 18, 2003 (the Final Office Action) issued in the Application. Claims 12-14, 16-18, 25, 26, 28-41 are pending after entry of the present Preliminary Amendment. Claims 1-11, 15, 19-24, and 27 have been cancelled and new claims 28-41 have been added. These amendments do not introduce any new matter. This Amendment is being presented in the new format, as suggested by the new proposed Rules.

Rejections under 35 U.S.C. § 102:

The Office has rejected claims 1, 2, 4-6, 8-14, and 16-27 under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,312,319 to Donohue et al. (Donohue). It is respectfully submitted that rejection of claims 1, 2, 4-6, 8-11, and 19-24 is moot in view of cancellation of these claims. As to claims 12-14 and 16-18, it is submitted that Donohue fails to identically disclose each and every element of the claimed invention, as defined in independent claim 12, as amended, and new independent claims 28 and 36.

Donohue discloses a polishing media magazine that includes a conditioning element that can include a roller, a rotating brush, and a tensioned web or belt of conditioning media. In Donohue, the conditioning element is defined in a plane that is perpendicular to the plane containing the polishing area. As a result, the contact area between the conditioning element and the polishing media is in the plane perpendicular to the polishing area, as illustrated in Figures 4A, 11, 14, 25, 16, 17. As further shown, the contact area between the conditioning element and the polishing media is indented.

It is submitted that Donohue fails to disclose each and every feature disclosed in amended independent claim 12. Among other features, Donohue fails to disclose that the fixed abrasive polishing pad is configured to move continuously in operation in one direction between a first point and a second point so that the polishing pad can be conditioned. Rather, Donohue teaches indexing a portion of the tension portion of the polishing pad in a forward direction. In this manner, only the portion of the polishing pad indexed forward is conditioned by the conditioning element.

Furthermore, as amended, the web dressing media of the claimed invention is applied to the fixed abrasive surface of the polishing pad prior to applying a wafer to be polished to the abrasive polishing pad. In contrast, in Donahue, as shown in Figures 4A, 11, 14, 15, 16, 17, and 18, only the indexed portion of the polishing media is conditioned after the polishing media has been applied to the wafer being polished.

New independent claim 28 defines a substrate polishing system that includes a first roller and a second roller that are aligned in a horizontal plane. The system further includes a pad belt that is wrapped around the first roller and the second roller such that a first horizontal plane (the top of the pad belt) and a second horizontal plane (the bottom of the pad belt) are defined in parallel. The system also includes an application device for applying a web dressing media to one of the top and the bottom of the pad belt. Support for this new claim is found in the drawings and specification, as-filed. To coordinate the support found in the drawings to the claims, a specification amendment is introduced herein. No new matter is introduced by this amendment.

In new independent claim 36, a system for polishing a wafer is disclosed that includes a polishing disk and a pressure application member. As claimed, the top surface of the polishing disk defines a wafer application region and the pressure application member is defined above the top surface of the polishing disk and is configured to apply a web dressing media to the top surface of the polishing disk.

Donahue fails to identically disclose each and every element of the new independent claims 28 and 36, as Donahue defines the web dressing media in a plane that is perpendicular to the horizontal plane containing the polishing plane. In fact, Donahue focuses on eliminating several defects associated with the conditioning processes wherein the conditioning is performed in the same plane as the polishing plane. To create the perpendicular plane, Donahue uses four separate rollers, a feed-roll, a take-up roll and two turnbars. The turnbars allow the polishing pad direction to be changed so that the polishing pad is defined at desired path such that a straight-line tangent is formed between any two adjacent elements. In this manner, Donahue claims that (1) accurate and constant tension is being applied to the conditioning element, thus ensuring consistent and uniform conditioning; and (2) defective conditioning resulting from misalignment of the polishing media and the head carrying the wafer being polished is eliminated, leading to elimination of equal and uniform conditioning.

Furthermore, Donahue fails to disclose conditioning of a disk using the web-style conditioner. Rather, Donahue focuses on conditioning web-style polishing pads wherein the conditioning element is defined in a plane perpendicular to the polishing area. Additionally, Donahue does not disclose an application device that can be a disk, a plate, or a roller.

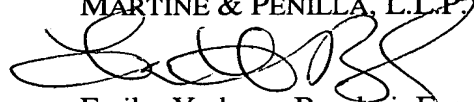
Accordingly, amended independent claim 12 is respectfully submitted to be patentable under 35 U.S.C. § 102(e) over Donahue. In a like manner, dependent claims 13, 14, and 16-18, each of which directly or indirectly depends from independent claim 12 are submitted to be patentable 35 U.S.C. § 102(e) over Donahue for at least the reasons set forth above regarding the independent claim 12. Similarly, new independent claims 28 and 36 are respectfully submitted to be patentable over the cited prior art. In a like manner, dependent claims 29-35 and 37-41 each of which directly or indirectly depends from the respective independent claim 28 and 36 are submitted to be patentable over the cited prior art for at least the reasons set forth above regarding the corresponding independent claim 28 and 36. As such, the Applicants respectfully request that the § 102(e) rejections be withdrawn.

Indication of Allowability:

The Applicants acknowledge the Office's comment that independent claims 25 and 26 are allowable.

In view of the foregoing, the Applicants respectfully submit that all of the pending claims 12-14, 16-18, 25, 26, 28-41 are in condition for allowance. Accordingly, a Notice of Allowance is respectfully requested. If the Examiner has any questions concerning the present Preliminary Amendment, the Examiner is kindly requested to contact the undersigned at (408) 749-6900, ext. 6913. If any additional fees are due in connection with filing this Amendment, the Commissioner is also authorized to charge Deposit Account No. 50-0805 (Order No. LAM2P206). A duplicate copy of the transmittal is enclosed for this purpose.

Respectfully submitted,
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